

a single processor or may be architectures employing multiple processor designs for increased computing capability.

[0060] Embodiments of the disclosure may also relate to a product that is produced by a computing process described herein. Such a product may comprise information resulting from a computing process, where the information is stored on a non-transitory, tangible computer readable storage medium and may include any embodiment of a computer program product or other data combination described herein.

[0061] Finally, the language used in the specification has been principally selected for readability and instructional purposes, and it may not have been selected to delineate or circumscribe the inventive subject matter. It is therefore intended that the scope of the disclosure be limited not by this detailed description, but rather by any claims that issue on an application based hereon. Accordingly, the disclosure of the embodiments of the disclosure is intended to be illustrative, but not limiting, of the scope of the disclosure, which is set forth in the following claims.

What is claimed is:

1. A tracking device comprising:
 - an illumination source integrated with a tracking glove coupled to a virtual reality console, the illumination source configured to illuminate a portion of skin on a finger of a user;
 - an optical sensor integrated with the-glove and configured to capture a plurality of images of the illuminated portion of skin; and
 - a controller configured to:
 - identify differences between some of the plurality of images, the differences corresponding to movement of the tracking glove with respect to the illuminated portion of skin, and
 - determine estimated position data for the tracking glove based in part on the identified differences.
2. The tracking device of claim 1, wherein the controller is further configured to:
 - determine that the tracking glove has changed its configuration with respect to the user's hand based on the estimated positions, the configuration selected from a group consisting of: detachment of the tracking glove from the user's hand, slip of the tracking glove from the user's hand, or both detachment of the tracking glove from the user's hand and slip of the tracking glove from the user's hand.
3. The tracking device of claim 1, further comprising:
 - an additional illumination source configured to illuminate a portion of surface external to an exterior of the tracking glove;
 - an additional optical sensor configured to capture a plurality of images of the illuminated portion of the surface; and
 - the controller further configured to:
 - identify differences between some of the plurality of images, the differences corresponding to movement of the tracking glove with respect to the surface, and
 - determine estimated position data based in part on the identified differences.
4. The tracking device of claim 3, the controller is further configured to
 - determine one or more actions performed by the user associated with content presented to the user based in part on the movement of the tracking glove.

5. The tracking device of claim 3, wherein the additional optical sensor is located on an area selected from a group consisting of: a portion of the tracking glove near a fingertip of the user, multiple portions of the tracking glove near multiple fingertips of the user, a portion of the glove near a finger pad of the user, multiple portions of the glove near multiple finger pads of the user, or some combination thereof.

6. The tracking device of claim 3, wherein the one or more identified actions performed by the user are selected from a group consisting of: repositioning a cursor within content presented to the user, selecting content presented to the user, navigating through content presented to the user, typing action performed by the user, or some combination thereof.

7. The tracking device of claim 1, wherein the controller is further configured to:

- identify differences between some of the plurality of images, the differences corresponding to movement of the illuminated portion of skin, and
- determine estimated position data for the finger based in part on the identified differences.

8. The tracking device of claim 7, wherein the movement of the illuminated portion of skin comprises at least bending of a particular joint of the user's finger.

9. The tracking device of claim 1, wherein the controller is further configured to:

- identify common features of different images of the plurality of images;
- identify differences between the common features in the different images of the plurality of images; and
- determine estimated position data based in part on the identified differences between the common features

10. The tracking device of claim 1, wherein the controller is further configured to:

- select a set of images from the plurality of images based on the identified differences;
- generate a corresponding set of displacement vectors based on the selected set of images; and
- generate a total displacement vector based on the generated set of displacement vectors, the total displacement vector indicating a change in position of the tracking glove relative to the user.

11. The tracking device of claim 1, wherein the portion of skin is selected from a group consisting of: a portion of skin around a joint of the user's finger, a portion of skin around fingertip of the user's finger, a portion of palmar skin of the user's hand, a portion of dorsal skin of the user's hand, or some combination thereof.

12. The tracking device of claim 1, wherein a resolution of the imaging device is at most 16x16 pixels.

13. The tracking device of claim 1, wherein the imaging device is configured to capture video with a frame rate of at least 1 kilo-Hertz.

14. A system comprising:

- a tracking glove that tracks movement of the tracking glove with respect to a user's skin, comprising:
 - an illumination source integrated with the tracking glove coupled to a virtual reality console, the illumination source configured to illuminate a portion of skin on a finger of the user, and
 - an optical sensor integrated with the-glove and configured to capture a plurality of images of the illuminated portion of skin; and